WHAT IS CLAIMED IS:

1. An optical element, comprising:

a first optical waveguide having a first incidence plane on which first color light is incident and an emergence plane opposed to the first incidence plane;

a second optical waveguide having a second incidence plane on which second color light is incident;

a third optical waveguide having a third incidence plane on which third color light is incident, the second optical waveguide and the third optical waveguide being joined to the first optical waveguide;

a first dichroic filter formed on a joint plane between the first optical waveguide and the second optical waveguide to reflect the first color light and the third color light and transmitting the second color light; and

a second dichroic filter formed on a joint plane between the first optical waveguide and the third optical waveguide to reflect the first color light and the second color light and transmitting the third color light;

the three color light being emerged from the emergence plane of the first optical waveguide.

2. The optical element according to Claim 1, the three incidence planes being arranged substantially on the same plane.

3. The optical element according to Claim 1, the first optical waveguide being a tapered optical waveguide in which the area of the emergence plane is larger than that of the first incidence plane.

4. An illuminator, comprising:

a first light source to emit first color light;

a second light source to emit second color light;

a third light source to emit third color light; and

the optical element according to Claim 1 having the three incidence planes on which the respective color light is incident.

5. The illuminator according to Claim 4, the first color light being green light.

6. A projection display device, comprising:

the illuminator according to Claim 4; and

a light modulator to modulate the color light emerged from the optical element.